

### ABSTRACT OF THE DISCLOSURE

A communication path control system is provided for use in a data network configured by a number of buses each of which installs at least one node as an isochronous resource manager (IRM) based on the IEEE 1394 standard. Adjacent  
5 buses are interconnected together by means of a bridge consisting of at least two portals, each of which has a connection counter for counting a number of receiving nodes for receiving stream packets being transmitted thereto from a transmitting node by itself. For establishment of a communication path, a device controller specifies all portals that lie in the communication path to request each of them to increment a value  
10 of the connection counter by '1'. For disconnection of the communication path, the device controller requests each of the specified portals to decrement a value of the connection counter by '1'. More specifically, each portal stores a communication path management table containing the connection counter, while the device controller stores a communication path management table that describes resources (e.g.,  
15 bandwidths, channels) in connection with a connection counter with respect to each of buses corresponding to the communication path. At occurrence of bus reset on a specific bus, its corresponding portal proceeds to initialization of the specific bus, then, the device controller proceeds to re-securement or release of the resources.